

PROCEEDINGS OF THE CALIFORNIA ACADEMY OF SCIENCES

Vol. 42, No. 3, pp. 69-85; 7 figs.

December 22, 1979

REVIEW OF THE RHINOTRAGINI OF MEXICO (COLEOPTERA: CERAMBYCIDAE)

By

John A. Chemsak and E. G. Linsley

University of California, Berkeley, CA 94720

ABSTRACT: The Rhinotragini known to occur in Mexico are reviewed. Keys are provided for the determination of the seven genera and also for species in the genera. Distribution maps are included for the more common species and most of the new taxa are illustrated. New species include: Tomopterus exilis, Acyphoderes amoena, A. fulgida, A. proluxa, and A. parva. New synonymies and one new combination are proposed.

INTRODUCTION

The Rhinotragini comprise a large group of Neotropical Cerambycidae which is particularly abundant and diverse in South America. The group is of special interest because of the remarkable degree of mimicry exhibited by most species. This is evident in modifications in form, coloration, and behavior, with the various taxa utilizing a wide range of models, particularly bees, wasps, and "protected" beetles of other families. Frequently, the mimicry is expressed in strong sexual dimorphism and dichromatism with males and females utilizing different models.

The number of species diminish as the group extends northward from South America, and only one is thus far known to occur in the United States. As presently defined, the Mexican fauna consists of 22 species in 7 genera. Some of the species appear to be restricted to Mexico, while others range into Central America to Costa Rica or Panama. One is also found in South America.

Tribe RHINOTRAGINI Lacordaire

- Rhinotragides LACORDAIRE, 1869:497.
Rhinotraginae BATES, 1873:21.
Rhinotragini LINSLEY, 1963:164.

Body more or less elongate. Head prolonged below eyes to form a muzzle; antennae usually shorter than body in both sexes, outer segments more or less serrated; eyes finely faceted, with lower lobes very large, nearly contiguous in front in males; palpi short, last segment subcylindrical or ovate-cylindrical, apex truncate; mandibles short. Pronotum cylindrical or rounded, without a lateral spine or tubercle; prosternum with intercoxal process narrow, level, anterior coxae usually obliquely exerted, cavities feebly angulate externally; intermediate coxal cavities open externally; episterna of metathorax very large, triangular, and in front broad and narrowly separated from coxae. Elytra nearly always modified, attenuated, subulate, or squamiform.

KEY TO THE MEXICAN GENERA OF RHINOTRAGINI

- 1. Elytra short, not extended over abdomen 2
Elytra longer, extended at least partially over abdomen 4
2(1). Elytra narrowing posteriorly, apices dehiscent and narrowly rounded 3

- Elytra not narrowing posteriorly, apices obliquely truncate *Tomopterus*
- 3(2). Pronotum with disk punctate, calluses, if present, small, rounded; posterior tibiae with very dense brush of long pubescence *Epimelitta*
- Pronotum with three longitudinal, glabrous calluses on disk; posterior tibiae with apical brush small, the pubescence short *Bromiades*
- 4(1). Pronotum uniformly punctate or with rounded calluses on disk; femora moderately clavate 6
- Pronotum usually with three distinct, longitudinal calluses on disk; anterior and intermediate femora often very strongly clavate 5
- 5(4). Antennae short, serrate apically; anterior and intermediate femora very strongly clavate *Acyphoderes*
- Antennae slender, elongate, filiform apically; anterior and intermediate femora narrowly clavate *Stenopseutes*
- 6(4). Elytra with disk vitreous transparent; pronotum about as long as broad or slightly longer *Odontocera*
- Elytra with disk shining, not transparent; pronotum narrow, distinctly longer than broad *Ommata*

Genus *Tomopterus* Audinet-Serville

Tomopterus AUDINET-SERVILLE, 1833:544; NEWMAN 1840:21; WHITE 1855:176; THOMSON 1860:166, 168; 1864:163, 416; LACORDAIRE 1869:509; BATES 1870:329; 1880:44.

This genus may be recognized by the short, rather squat form, short, subserrate antennae, rounded pronotum, short, apically truncate elytra, and arcuate posterior femora.

TYPE-SPECIES: *Tomopterus staphylinus* Audinet-Serville, 1833 (monotypic).

The species of *Tomopterus* appear to mimic eumenine vespids. Two species occur in Mexico.

Tomopterus vespoidea White

Tomopterus vespoidea WHITE, 1855:176, pl. 5, fig. 8; BATES 1880:44; 1885:291; FISHER 1930:17.

MALE: Integument black, antennae reddish distally, apices of hind femora and tibiae pale, elytra usually narrowly reddish along lateral margins and with a reddish median stripe extending from humeri arcuately to middle of

apex. Head with eyes contiguous on front; antennae with segments from fifth expanded, subserrate. Pronotum almost as broad as elytra; disk coarsely, contiguously punctate; apex and base with bands of yellow, appressed pubescence. Scutellum elongate, triangular, nonpubescent. Elytra moderately coarsely, densely punctate, sparsely pubescent. Abdomen with sternites margined with yellowish, appressed pubescence; parameres prominent. Length, 8–10 mm.

FEMALE: Form more robust. Head with eyes separated on front by about width of antennal scape. Scutellum yellow-pubescent. Elytra black medially, remainder reddish. Abdomen bulbous, pointed apically. Length, 8–10 mm.

TYPE-LOCALITY: Guatemala.

RANGE: Tamaulipas, Mexico to Panama.

FLOWER RECORDS (Costa Rica): *Bixa*, *Forsteronia*, *Byrsonima*, *Paullinia*, *Cordia*.

NEW RECORDS: 1 female, 10 miles [16 km] N Ciudad Victoria, Tamaulipas, 20 Aug. 1941 (H. S. Dybas); 1 female, 9 miles [ca. 14 km] S Tuxpán, Veracruz, 11 June 1961 (Michener and Ordway); 1 female, Tehuantepec, Oaxaca, 8 July 1962.

Tomopterus exilis, new species

(Figure 1)

FEMALE: Form small, rather slender; integument black, antennae brownish; elytra narrowly pale at base, each side with a broad, oblique, pale vitta extending from behind humerus to apex; anterior and intermediate legs brownish, posterior femora pale over basal one-half; pubescence silvery, appressed. Head with front rather short, moderately coarsely, densely punctate; eyes separated on front by little more than diameter of antennal scape; separated on vertex by about twice diameter of scape; antennae clavate, enlarging from fifth segment, outer segments broader than long, with small apical poriferous areas, third segment longer than first, fourth shorter than first, fifth longer than fourth, basal segments with a few, long, erect setae beneath. Pronotum as long as broad, cylindrical; disk coarsely, deeply reticulate-punctate; apex narrowly impressed, base rather broadly impressed; apex and base with narrow transverse silvery bands of appressed pubescence, each side with a narrower band behind middle extending from sides to coxal cavities; long, pale, erect hairs numerous; prosternum densely punctate, sparsely clothed with long, erect hairs;

mesosternum with a broad pubescent band over epimeron; metasternum sparsely punctate, with a long erect seta rising from each puncture, a narrow, oblique, pubescent band present posteriorly. Scutellum densely silver-pubescent. Elytra broader than long, densely, deeply, contiguously punctate; pubescence long, erect; pale vittae in form of a broad V; apices obliquely truncate. Legs slender; femora enlarged over apical one-half, hind pair arcuate, extending almost to apex of abdomen; tibiae slender. Abdomen only slightly enlarged posteriorly; punctures and pubescence fine, sternites more densely pubescent along posterior margins; last sternite rounded at apex. Length, 8 mm.

Holotype, female (National Museum of Natural History) from Cancún, Quintana Roo, Mexico, 25 Apr. 1974 (D. Pletsch).

The more slender form, cylindrical rather than transverse pronotum, and longer antennae will separate this species from *T. vespoides* White.

Genus *Epimelitta* Bates

Charis NEWMAN, 1840:21; THOMSON 1864:163; LACORDAIRE 1869:507 (name preoccupied). Type-species: *Charis euphrosyne* Newman, 1840, Thomson designation, 1864).

Epimelitta BATES, 1870:330; 1873:123.

Charisia CHAMPION, 1892:161 (new name for *Charis* Newman, 1840, preoccupied).

The Mexican species in this genus may be recognized by the short elytra, lack of longitudinal calluses on the pronotum, and densely tufted posterior tibiae.

TYPE-SPECIES: *Epimelitta meliponica* Bates, 1870 (by present designation).

Most species of *Epimelitta* mimic meliponid bees. The group is dominantly South American with only two species presently known from Mexico.

Epimelitta nigerrima (Bates)

Charisia nigerrima BATES, 1892:160, pl. 6, fig. 8.

Epimelitta nigerrima: AURIVILLIUS 1912:284.

FEMALE: Integument black, antennae reddish brown. Antennae short, serrate from fifth segment. Pronotum densely clothed with long erect pubescence; disk callused behind middle. Elytra strongly dehiscent, densely punctate. Legs short, femora and tibiae with dense tufts of dark pubescence. Length, 11 mm.

TYPE-LOCALITY: Atoyac, Veracruz, Mexico. Only the holotype of this species is known.

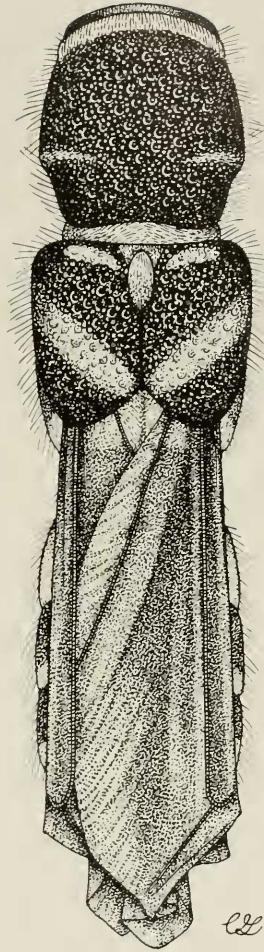


FIGURE 1. Dorsal view of pronotum and body of *Tomopteris exilis* Chemsak and Linsley, female.

Epimelitta aureopilis Fisher

Epimelitta (?) *aureopilis* FISHER, 1953:16.

MALE: Form slender, elongate; head, prothorax, part of metasternum and often bases of hind femora black, antennae reddish brown, elytra testaceous except for narrow black lateral and sutural margins, legs and abdomen partially reddish, posterior tarsi yellow. Head small, front golden pubescent; antennae slender, moderately serrate. Pronotum densely, coarsely punctate; apex and base with a broad band of appressed golden pubescence, basal band reaching to about middle at center. Elytra dehiscent, sparsely pubescent. Legs with posterior pair very elongate, femora feebly clavate, tibiae with

a dense tuft of long reddish-orange pubescence. Abdomen elongate, slender, last sternite barely impressed. Length, 16–21 mm.

FEMALE: Form and coloration similar. Abdomen with last sternite narrowly rounded at apex. Length, 18–23 mm.

TYPE-LOCALITY: Tolomé, Veracruz, Mexico.

This species differs greatly in facies from other known *Epimelitta*. Its long, slender form with very long posterior legs, make it especially distinctive. However, except for these characteristics, *aureopilis* is structurally similar to other species within the genus.

Fisher (1953) tentatively assigned *aureopilis* to *Epimelitta* because of the difficulty in delimiting genera of Rhinotragini. We have retained it in this genus since it is beyond the intent of this paper to attempt to clarify the generic classification of this primarily South American group.

NEW RECORDS: 3 females, 3 males, Cotaxtla Exp. Sta., Cotaxtla, Veracruz, 1 Aug. 1962 (D. H. Janzen); 1 male, Ixmal, Yucatán (G. F. Gaumer); 1 female, 30 miles [48 km] NE Tehuantepec, Oaxaca, 8 July 1955 (D. Giuliani).

Genus *Bromiades* Thomson

Bromiades THOMSON, 1864:165; LACORDAIRE 1869:506; BATES 1873:120; ZAYAS 1975:130.

The tricallused pronotum, strongly serrate antennae, and short, tapered elytra distinguish this genus.

TYPE-SPECIES: *Odontocera brachyptera* Chevrolat, 1838 (by original designation).

Bromiades brachyptera (Chevrolat)

Odontocera brachyptera CHEVROLAT, 1838:285; JACQUELIN DUVAL in SAGRA 1857:269, pl. 10, fig. 9.

Bromiades brachyptera; THOMSON 1864:165; BATES 1873:120; FISHER 1930:13; LINSLEY 1935:85, pl. 2, fig. 3; ZAYAS 1956:113; 1975:131, pl. 17, fig. a.

Bromiades meridionalis FISHER, 1930:14 (type-locality, Cabima, Panama). **NEW SYNONYMY.**

MALE: Integument black, shining, antennal segments four to usually eight, yellowish basally; elytra broadly testaceous medially; femora usually with basal one-half testaceous; anterior and intermediate tibiae basally and posterior pair except apically, testaceous. Pronotum densely clothed with golden, recumbent pubescence between calluses. Abdomen not modified apically. Length, 15–17 mm.

FEMALE: Form and coloration similar to male,

abdomen broader. Antennae occasionally almost all black. Length, 16–18 mm.

TYPE-LOCALITY: Cuba.

RANGE: Central Mexico to Colombia and Cuba.

HOST PLANTS: *Andira inermis* (W. Wright) H.B.K. ex D.C. (Cuba).

FLOWER RECORDS. Costa Rica: *Cordia*, *Casearia*, *Forsteronia*, *Coccoloba*, asclepiad vine, Mexico: *Spondias*.

Color variation is apparent in the antennae and legs. Specimens from Panama have dominantly black antennae and orange posterior femora and tibial brushes. This type of color variation occurs in numerous species throughout the tribe.

We have seen no additional specimens from Mexico since those reported by Linsley (1935) from Bejucos.

Genus *Acyphoderes* Audinet-Serville

Acyphoderes AUDINET-SERVILLE, 1833:549; WHITE 1855:194; THOMSON 1860:179; 1864:165; LACORDAIRE 1869:505; BATES 1873:117; 1880:43.

This genus may be recognized by the dorsal callosities of the pronotum. The antennae are distally serrate and usually extend to about the middle of the elytra. The elytra are subulate or elongate, narrowed posteriorly and extend to the abdomen. The anterior and intermediate femora are usually strongly clavate. Males of most species have the last abdominal sternite modified in varying degrees.

TYPE-SPECIES: *Acyphoderes aurulenta* Kirby, 1818 (Thomson designation, 1864).

Acyphoderes, with ten species, is the largest group of Rhinotragini found in Mexico. Two other species, *velutinus* Bates, 1885, and *vespiventris* Bates, 1880, described originally from Guatemala, probably also occur in Mexico.

Key to the Mexican species of *Acyphoderes*

1. Pronotum black, with discal callosities shining, punctures sparse or absent 2
- Pronotum reddish or infuscated, discal callosities opaque, densely punctate 5
- 2(1). Pronotum with transverse or longitudinal bands of dense, appressed pubescence 3
- Pronotum rather sparsely pubescent,

- without basal and apical transverse pubescent bands 4
- 3(2). Pronotum densely pubescent along apical and basal margins, dorsal calluses usually punctate, lateral pair rounded, punctures very dense, confluent. Length, 13–20 mm. Sinaloa to Oaxaca and Veracruz *cribricollis*
 Pronotum densely pubescent except on calluses, calluses shining, elongate, not punctate, punctures obscured. Length, 14–18 mm. Sinaloa to Chiapas *amoena*
- 4(2). Elytra subulate, extending only to anterior margin of second abdominal segment; abdomen strongly inflated toward apex. Length, 17–21 mm. Nayarit to Oaxaca and Veracruz *sexualis*
 Elytra more gradually tapering, extending over first three abdominal segments; abdomen narrowed toward apex. Length, 14–18 mm. Veracruz to Costa Rica *fulgida*
- 5(1). Elytra with apices rounded, as broad as or broader than diameter of antennal scape 6
 Elytra with apices truncate to emarginate, narrower than diameter of antennal scape 7
- 6(5). Pronotum deeply impressed at base and apex, with bands of dense appressed pubescence in impressions; elytra black around scutellum. Length, 20–25 mm. Colima *prolixa*
 Pronotum not deeply and broadly impressed at base and apex, without transverse bands of dense pubescence; elytra pale around scutellum. Length, 11–18 mm. Baja California .. *delicata*
- 7(5). Pronotum with apical and basal transverse bands of dense, appressed pubescence, dorsal calluses moderately elevated 8
 Pronotum rather uniformly pubescent, without transverse bands, dorsal calluses prominently elevated. Length, 15–20 mm. Colima to Oaxaca and Veracruz *acutipennis*
- 8(7). Elytra 2.5 or more times longer than basal width, extending at least to third abdominal segment 9

- Elytra short, 2.0 times as long as basal width, extending only to second abdominal segment. Length, 10–18 mm. Campeche to Honduras *yucateca*
- 9(8). Legs with hind femora pedunculate; abdomen abruptly inflated toward apex; elytra with two oblique, usually brownish, scabrous bands at base. Length, 11–16 mm. Sinaloa to Nayarit *parva*
 Legs with hind femora gradually enlarged; abdomen gradually expanded toward apex; elytra punctate at base, with a triangular yellowish area around scutellum. Length, 13–22 mm. Sonora and Tamaulipas to Costa Rica *suavis*

Acyphoderes cribricollis Bates

Acyphoderes cribricollis BATES, 1892:160, pl. 6, fig. 6; LINSLEY 1935:84; CHEMSAK 1967:74 (lectotype).

MALE: Form slender, elongate; integument black; antennae reddish brown, usually infuscated apically; elytra testaceous, shining, margins dark, legs pale, hind pair with femoral club and apices of tibiae brownish; abdomen with first two segments yellowish, usually infuscated apically, other segments usually reddish. Head with front densely pubescent, eyes separated by less than diameter of antennal scape. Pronotum longer than broad; apex and base broadly impressed; disk with median callus punctate, lateral pair more elevated anteriorly, glabrous, rounded; punctures dense, opaque; apical and basal margins with broad bands of dense, appressed, golden pubescence, bands joined laterally and usually extended longitudinally on disk on each side of middle; pro- and mesosternum pubescent; anterior one-half of metasternum and posterior end of episternum densely pubescent. Elytra extending to posterior margin of third abdominal segment; base and disk finely, sparsely punctate, margins densely punctate; apices rounded, about as broad as antennal scape. Legs with femora clavate, anterior and intermediate pairs moderately clavate. Abdomen slender, slightly enlarged toward apex; last sternite deeply, broadly excavated, margins prominent, elevated apically. Length, 14–20 mm.

FEMALE: Form similar. Head with eyes widely separated on front. Abdomen with last sternite not modified. Length, 13–20 mm.



FIGURE 2. Known distribution of *Acyphoderes cribricollis* Bates.

TYPE-LOCALITY: Ventanas, Durango.

FLOWER RECORDS: *Croton*, *Xanthoxylum*, *Jatropha*.

The dense pubescence, rounded, glabrous calluses, and dense, opaque punctation of the pronotum distinguish this species.

NEW RECORDS: See Figure 2.

Acyphoderes amoena, new species
(Figure 3)

MALE: Form moderate sized; integument black; antennae reddish brown; elytra shining, yellow-brown, margins black, base often with two short dark vittae extending back from inside of humeri; legs orange-brown, posterior femora often dark over clavate portion; abdomen usually pale and dark. Head with eyes separated on front by less than diameter of antennal scape; front and vertex densely clothed with appressed golden pubescence. Pronotum longer than broad, sides impressed before and behind middle; disk uneven, dorsal calluses glabrous, elevated, sides with smaller calluses before middle, pubescence between calluses dense, appressed, golden, obscuring surface, long, erect hairs rath-

er sparse; prosternum densely pubescent; mesosternum densely clothed with appressed golden pubescence; metasternum densely pubescent except for rectangular areas near base, episternum with dense pubescent patches posteriorly and anteriorly on upper margin. Elytra elongate, extending to fourth abdominal segment; lateral margins darkened, narrowly punctate, sutural margins elevated, narrowly dark; disk shining, very sparsely punctate except on base; apices rounded, broad. Legs with anterior and intermediate femora moderately clavate; posterior femora gradually clavate; posterior tibiae densely pubescent over apical one-half. Abdomen not apically enlarged; sternites with small patches of dense pubescence at sides of apical margins; last sternite broadly excavated, margins elevated toward apex, angles blunt. Length, 14–18 mm.

FEMALE: Form similar. Head with eyes widely separated on front. Abdomen with last sternite broadly rounded at apex. Length 16–18 mm.

Holotype, male (California Academy of Sciences) from 3 miles [ca. 5 km] E Villa Union, Sinaloa, Mexico, 24 July 1972,

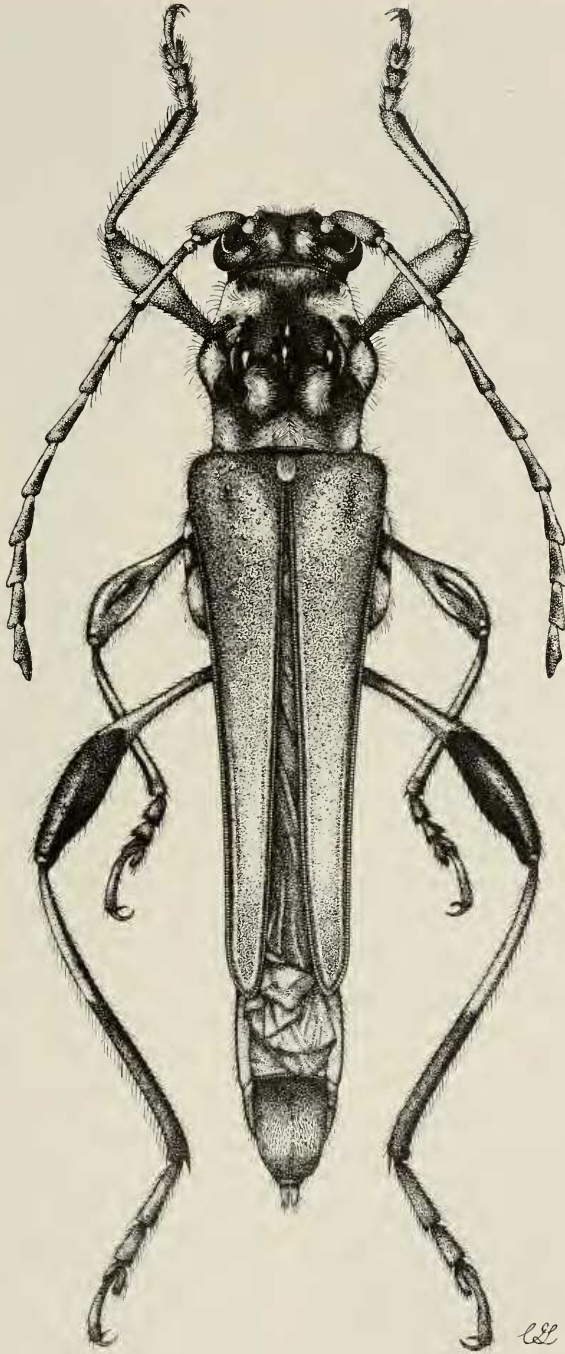


FIGURE 3. *Acyphoderes amoena* Chemsak and Linsley, male.

on *Jatropha curcas* flowers (J. A. and M. A. Chemsak, A. E. and M. M. Michelbacher). Paratypes as follow: 1 male, same data as type; 1 female, 16 miles [ca. 26 km] NE San Blas, Nayarit, 21 July 1963 (R. Westcott); 1 male, 14 miles [ca. 23

km] NW Tehuantepec, Oaxaca, 26 June 1961, on flowers of *Croton* (Univ. Kans. Mex. Exped.); 1 male, 23 miles [ca. 37 km] S Matias Romero, Oaxaca, 14 Aug. 1963 (Parker and Stange); 1 female, Playa La Ventosa, 3.5 miles [ca. 5.6 km]

NE Salina Cruz, Oaxaca, 28 July 1970 (Fisher, Sullivan); 1 female, 5 miles [ca. 8 km] NW Escuinapa, Sinaloa, 25 July 1971 (Fisher).

We are also assigning to this species five specimens from various localities in Mexico which differ in having the antennae black, with segments 8–11 all or partially yellow. In most of these, the two basal black vittae of the elytra are very distinct and the pubescence is more silvery than golden. Structurally they are identical with the typical forms.

Records are: 1 female, Tecolopa, Colima, 31 July 1954 (Cazier, Gertsch, Bradts); 1 female, 10 miles [ca. 16 km] W Colima, 1 Aug. 1954 (Cazier, Gertsch, Bradts); 1 male, Manzanillo, Colima, 12 July 1956 (R. and K. Dreisbach); 1 male, Acapulco, Guerrero, 30 July 1933 (M. A. Embury); 1 male, 31 miles [ca. 50 km] SE Comitán, Chiapas, 18 June 1965 (Burke, Meyer, Schaffner).

Acyphoderes sexualis Linsley

Acyphoderes sexualis LINSLEY, 1934:349; 1935:84, pl. 2, figs. 1, 1a.

MALE: Form rather elongate; integument black, antennae with basal segments infuscated beneath, reddish above, outer segments pale annulate basally; elytra with disk pale vitreous; abdomen with first segment reddish at middle; posterior legs with femora narrowly pale basally, tibiae yellowish at basal one-half. Head with eyes separated on front by about diameter of third antennal segment. Pronotum slightly broader than long, sides impressed behind middle, base narrower than apex; disk with three longitudinal, sparsely punctate, shining calluses; punctures between calluses fine, dense; pubescence fine, moderately dense, appressed, long erect hairs numerous; mesosternum with epimeron densely pubescent; metasternum with a broad, densely pubescent band anteriorly and a narrow band along posterior margin. Elytra subulate, extending to anterior portion of second abdominal segment; lateral margins broadly black and densely punctate, sutural margins narrowly black, impunctate; base scabrous, with two oblique black vittae behind scutellum; disk vitreous, almost impunctate. Legs with anterior and intermediate femora strongly clavate; posterior tibiae with a dense brush of hairs over apical one-half. Abdomen strongly inflated toward apex; sternites with first three segments margined at sides and apices with dense pubescence; last sternite with a large circular plate,

sides prominently elevated; claspers large. Length, 20–21 mm.

FEMALE: Form similar. Head with eyes widely separated on front. Pronotum with dorsal calluses less prominent. Abdomen with last sternite excavated but lacking a plate. Length, 17 mm.

TYPE-LOCALITY: Bejucos, Temascaltepec, Mexico.

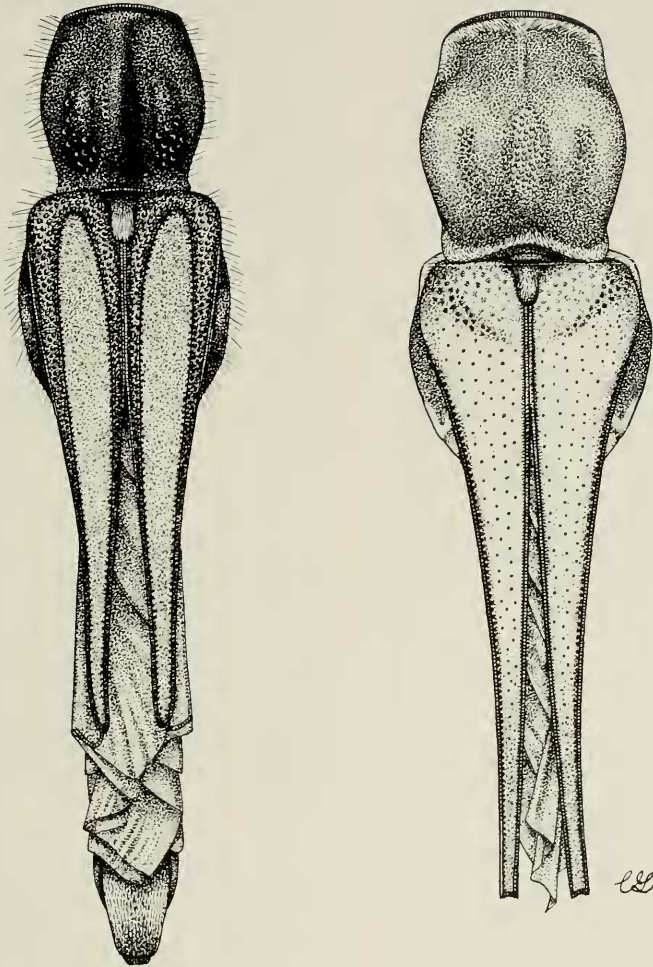
FLOWER RECORDS: *Acacia*, *Spondias*.

NEW RECORDS: 1 male, Arroyo Santiago, near Jesus Maria, Nayarit, 5 July 1955 (B. Malkin); 1 male, Mexcala, Guerrero, 29 June 1951 (H. Evans); 2 males, 20 miles [32 km] S Matias Romero, Oaxaca, 25 June 1961, on flowers of *Acacia* (Univ. Kans. Mex. Exped.); 1 female, 8 miles [ca. 13 km] NE Catemaco, Veracruz, 3 July 1971 (Clark, Murray, Hart, Schaffner).

Acyphoderes fulgida, new species

(Figure 4)

MALE: Form moderate sized, tapering; integument black, shining; antennae often brownish toward apex; elytra with disk testaceous, vitreous; hind femora usually testaceous over basal one-half except at extreme base. Head with eyes contiguous on front; inner margins of front elevated, nonpubescent. Pronotum longer than broad, sides impressed behind middle; disk with dorsal calluses elongate, barely punctate, shining; sides with oblique calluses on anterior one-half; punctures between calluses fine, dense; pubescence fine, pale, appressed, denser on sides, long, pale, erect hairs numerous; prosteronum densely punctate at middle, densely clothed with long, pale, erect hairs; mesosternum with a dense, pale, pubescent patch on epimeron; metasternum densely pubescent over apical one-fourth, episternum with a small pubescent patch at end. Elytra elongate, extending to fourth abdominal segment; lateral margins broadly black at base, narrowly black toward apex, sutural margins more broadly black at base; punctures dense on dark margins, disk very sparsely punctate; apices rounded, broader than antennal scape. Legs with anterior and intermediate femora strongly clavate, clavae large; posterior femora gradually clavate; posterior tibiae with a moderately dense brush of dark hairs over apical one-half. Abdomen not enlarged apically; sternites one to three densely clothed with pale pubescence along lateral and apical margins and with a double row at middle; last sternite shallowly excavated with a large blunt tubercle on



FIGURES 4-5. Dorsal view of pronotum and body of (left) *Acyphoderes fulgida* Chemsak and Linsley, male, and (right) *Acyphoderes parva* Chemsak and Linsley, male.

each side at base, claspers densely pubescent. Length, 16-18 mm.

FEMALE: Form similar. Head with eyes separated on front by more than diameter of antennal scape. Pronotum very sparsely punctate between calluses. Abdomen with last sternite narrowly rounded at apex. Length, 14-18 mm.

Holotype, male; allotype (California Academy of Sciences) from La Pacifica, 4 km NW Cañas, Guanacaste Prov., Costa Rica, 25 May 1974, on *Casearia nitida* flowers (P. Opler). Six **paratypes** (3 males, 3 females) same locality, all collected by P. Opler, 25 May 1974, 2-4 June 1973, on asclepid vine, 3 June 1971, on *Trigonia floribunda*; 1 female, 2 miles [ca. 3.2 km] NW Cañas, 18-21 May 1974 (E. Giesbert); 2 females, Playa Hermosa, Guanacaste, 6-10 June 1974 (Giesbert).

Two additional specimens (1 male, 1 female) from Salto Eyiplantla, near Catemaco, Veracruz, Mexico, 17 Aug. 1976 (J. Hafernik and R. Garrison) are also assigned to this species.

In addition to the marked sexual dimorphism, this species varies slightly in coloration. Males occasionally have the posterior femora yellow and brownish. Some of the females have the femora and tibiae pale brownish except for the apical one-half of the hind tibiae.

The elongate elytra, punctation of the pronotum, and nonbulbous abdomen will separate *fulgida* from *sexualis*. The structure of the male copulatory apparatus is also strikingly different in the two species.

***Acyphoderes prolixa*, new species**

MALE: Form very elongate; head reddish; antennae brownish; pronotum black; dorsal calluses reddish; elytra testaceous, margins brownish, base with a triangular black spot around scutellum; thoracic sterna black; legs pale, tibiae dark on dorsal edge, femora black internally on anterior portion of club; abdomen pale basally, reddish toward apex, sternites variably infuscated at bases. Head with eyes separated on front by about diameter of antennal scape; inner margins of front densely pubescent; antennae with segments from fourth opaque. Pronotum slightly longer than broad, sides rounded; apex and base broadly impressed; disk convex, dorsal calluses moderately elevated; calluses punctate, other punctures fine, dense; apex and base with densely pubescent bands; prosternum densely pubescent; mesosternum with epimeron densely clothed with pale appressed pubescence; metasternum densely pubescent anteriorly, episternum with a dense pubescent patch posteriorly. Elytra narrow, extending at least to middle of third abdominal segment; lateral margins brownish, densely punctate, sutural margins elevated, pale brownish; disk shining, testaceous, very sparsely punctate; apices rounded, about as wide as antennal scape. Legs with anterior and intermediate femora strongly clavate; posterior femora petiolate, clavae moderate. Abdomen elongate, not enlarged apically; sternites densely punctate, moderately densely pubescent; fourth sternite shallowly impressed at apex; last sternite broadly, deeply impressed, margins elevated basally, not forming angle at apex. Length, 21–25 mm.

FEMALE: Form more robust, less elongate. Head with eyes widely separated on front. Pronotum reddish, black on apical and basal margins; metepisternum partially reddish. Abdomen enlarged apically; last sternite not impressed. Length, 20–24 mm.

Holotype, male, **allotype** (American Museum of Natural History) and 6 paratypes (3 males, 3 females) from 10 miles [ca. 16 km] W Colima, Colima, Mexico, 1 Aug. 1954 (M. Cazier, W. Gertsch, Bradts).

This species may be recognized by the elongate form and black triangular patch around the scutellum. The coloration, more petiolate posterior femora, and broadly excavated, margined last abdominal sternite of the males will separate *prolixa* from *suavis*.

***Acyphoderes delicata* Horn**

Acyphoderes delicatus HORN, 1894:400; HAMILTON 1896:168; LINSLEY 1942:54.

MALE: Form slender, gradually tapering; integument reddish; antennae orange-brown; elytra shining pale brownish, margins darker; underside partially infuscated; legs pale, femora with clavate portions brownish, hind tibiae broadly brown at apices. Head with eyes separated on front by more than diameter of antennal scape. Pronotum as long as broad, broadly rounded; disk opaque, median callus narrow, elongate, lateral pair broader, arcuate, densely punctate; pubescence fine, uniform, dense, short, erect; mesosternum with sides densely pubescent; metasternum densely pubescent over anterior one-half, episternum with a dense pubescent patch posteriorly. Elytra extending to fourth abdominal segment; base narrowly yellowish, sparsely punctate, margins densely punctate, disk sparsely punctate; apices rounded, much broader than antennal scape. Legs with anterior and intermediate femora clavate, clavae small; posterior tibiae densely pubescent at apical one-half. Abdomen slender, not enlarged apically; last sternite very shallowly impressed at apex, sides not margined. Length, 11–18 mm.

FEMALE: Not seen.

TYPE-LOCALITY: El Taste, Baja California Sur.

This species is distinctively characterized by the inflated, opaque pronotum and apically slender abdomen.

NEW RECORDS: 2 males, Santa Victoria Trail: La Burrera-La Laguna ridge, 1,200–1,350 m, Baja California Sur, 28 Aug. and 2 Sep. 1977 (R. L. Westcott).

***Acyphoderes acutipennis* Thomson**

Acyphoderes acutipennis THOMSON, 1860:179; BATES, 1880:43; 1885:290.

MALE: Form elongate, strongly tapered; integument brownish; calluses of pronotum often yellowish; elytra yellowish brown. Head with eyes separated on front by about diameter of antennal scape; pubescence sparse. Pronotum longer than broad, sides impressed behind middle; disk with calluses prominently elevated, punctate, subopaque; pubescence moderately dense, pale, appressed, rather uniform; mesosternum with a dense patch of appressed pubes-

cence at sides; metasternum with a small pubescent patch on posterior part of episternum. Elytra elongate, strongly tapered, extending to anterior margin of third abdominal segment; lateral margins broadly brownish, densely punctate, sutural margins narrowly brownish; base finely, densely asperate punctate; disk finely, sparsely punctate, each puncture bearing a short erect seta; apices truncate, narrower than diameter of antennal scape. Legs with anterior and intermediate femora strongly clavate. Abdomen gradually inflated toward apex; last sternite shallowly impressed at apex, sides barely margined. Length, 15–20 mm.

FEMALE: Form similar. Head with eyes more widely separated on front. Abdomen more bulbous, last sternite not impressed. Length, 16–20 mm.

TYPE-LOCALITY: Mexico.

The prominent, often pale calluses of the pronotum and rather elongate, apically narrow elytra make this species distinctive.

New records: 4 males, 2 females, Temascal, Oaxaca, 3 June 1964, 1 Nov. 1963 (D. Janzen); 1 male, Tezonapa, Veracruz, July 1906; 1 male, Colima, Colima (Conrad).

***Acyphoderes yucateca* (Bates), new combination**

Odontocera yucateca BATES, 1892:159, pl. 6, fig. 7; CHEMSAK 1967:78 (lectotype).

MALE: Form moderately elongate, strongly tapered; integument light to dark reddish brown; elytra with disk testaceous. Head with eyes separated on front by about diameter of antennal scape. Pronotum longer than broad, sides lightly impressed behind middle, base slightly narrower than apex; disk with elongate calluses punctate, opaque; punctation dense, shallow, scabrous; base and apex with narrow bands of dense, appressed pubescence, long erect hairs rather sparse; meso- and metasternum with small, densely pubescent patches at sides of posterior margins. Elytra strongly tapered, extending to anterior margin of second abdominal segment; lateral margins dark from behind humeri to apices, densely punctate, sutural margins narrowly dark; impunctate; base moderately densely punctate, punctures sparse toward apex, each bearing a short seta; humeri and often a V-shaped basal vitta dark; apices truncate, narrower than diameter of antennal scape. Legs with anterior and intermediate femora strongly clavate. Abdomen moderately inflated toward

apex; two basal segments yellowish; last sternite shallowly impressed, sides lightly margined; last tergite densely clothed with appressed pubescence. Length, 10–18 mm.

FEMALE: Form similar. Head with eyes more widely separated on front. Abdomen more inflated toward apex; last sternite unmodified. Length, 12–18 mm.

TYPE-LOCALITY: Temax, Yucatán, Mexico.

The pubescent bands and less elevated calluses of the pronotum will distinguish this species from *acutipennis*.

NEW RECORDS: 4 males, Yucatán (G. F. Gaumer); 3 males, 3 females, Piste, Yucatán, 6 and 26 Sep. 1967 (E. Welling); 1 male, Yaxche, Yucatán, 10 Sep. 1964 (J. and D. Pallister); 1 male, 1 female, X-Can, Quintana Roo, 25 June 1967, 26 Sep. 1967 (Welling); 1 male, Hwy. 180, Quintana Roo, 23 Mar. 1964 (E. L. Mockford); 1 male, 26 miles [ca. 42 km] S Yucatán line, Campeche, 30 June 1963 (Porter); 1 male, Campeche, Campeche, 30 June 1966 (McFadden); 1 male, El Zapotal, 2 miles [ca. 3.2 km] S Tuxtla Gutiérrez, Chiapas, 9 July 1957 (J. Chemsak); 1 female, Puerto Castilla, Honduras, Sep. 1945 (Crowell).

***Acyphoderes parva*, new species**

(Figure 5)

MALE: Form rather small, short; integument pale brownish; head, pronotum, underside, and abdomen variously infuscated; elytra testaceous, dark margined, and with two dark, oblique basal bands. Head with eyes separated on front by a little more than diameter of antennal scape; inner margins of front densely pubescent. Pronotum longer than broad, sides slightly impressed behind middle; disk convex, dorsal calluses rather prominent, punctate; surface densely punctate, opaque; apical and basal margins with narrow pubescent bands; sternum with a narrow, densely pubescent band at sides; metasternum densely pubescent, with a pubescent patch at end of episternum. Elytra extending to anterior margin of third abdominal segment; base finely scabrous, densely punctate; lateral margins densely punctate, disk finely, sparsely punctate; apices truncate, narrower than antennal scape. Legs with anterior and intermediate femora strongly clavate, clavae large; hind femora petiolate, clavae short; hind tibiae arcuate. Abdomen enlarged toward apex; two basal segments with lateral patches of dense pubescence; last sternite broadly excavated, margins elevated at apex forming obtuse angles. Length 11–15 mm.

FEMALE: Form similar. Head with eyes more widely separated on front. Pronotum with dorsal calluses less prominent. Abdomen bulbous, last sternite not impressed. Length, 12–16 mm.

Holotype, male; allotype (California Academy of Sciences) from 5 miles [ca. 8 km] N Mazatlán, Sinaloa, Mexico, 1 Aug. 1972, on flowers of *Buddleia wrightii* (J. A. and M. A. Chemsak), 9–15 Aug. 1970, on *B. wrightii* (J. A. Chemsak). **Paratypes** as follow: 1 female, 5 miles [ca. 8 km] N Mazatlán, 9–15 Aug. 1970, on *Buddleia* (J. A. Chemsak); 10 males, Mazatlán, 28 Nov. 1962 (T. Gantenbein); 1 female, Acaponeta, Nayarit, 19 Nov. 1955 (E. C. Bay); 2 males, 15 miles [ca. 24 km] NW Acaponeta, 19 Oct. 1964 (A. E. Michelbacher); 1 male, 15 miles [ca. 24 km] S Acaponeta, 20 Aug. 1964 (Burke and Apperson); 1 female, Teacapán, Sinaloa, 29 June 1956 (R. and K. Dreisbach); 2 females, Tuxpán, Nayarit, 20 Aug. 1964 (Burke and Apperson); 1 female, 60 miles [ca. 97 km] N Tepic, Nayarit, 15 Aug. 1957 (J. A. Chemsak).

This species averages smaller in size than most other Mexican *Acyphoderes*. It can be separated from *suavis* by the different coloration, more inflated abdomen, and petiolate posterior femora. Additionally, the excavation of the last abdominal sternite of males is deeper and the margins more highly elevated.

The coloration of *parva* varies from brownish to black and the basal oblique dark bands of the elytra are often vague.

Acyphoderes suavis Bates

Acyphoderes suavis BATES, 1885:290, pl. 20, fig. 20.

MALE: Form elongate; integument reddish; antennae with segments 6–8 usually infuscated; elytra pale brownish with a pale triangular basal area; underside variously infuscated; front and middle femora basally and dorsally dark, hind femora dark at middle; hind tibiae dark annulate on apical one-half. Head with eyes separated on front by slightly more than diameter of antennal scape. Pronotum longer than broad, sides lightly impressed behind middle; apex and base narrowly impressed; dorsal calluses moderately elevated, opaque; apex and base with a band of dense, appressed pubescence; mesosternum with epimeron densely pubescent; metasternum with a densely pubescent patch at posterior edge of episternum. Elytra extending to third abdominal segment; lateral margins lightly infuscated, densely punctate; disk finely, sparsely punctate; apices truncate, as broad as or narrower than antennal scape. Legs with anterior and intermediate femora strongly clavate, posterior pair gradually clavate. Abdomen gradually enlarged

apically; last sternite impressed at apex, sides moderately produced apically. Length, 13–24 mm.

FEMALE: Form similar. Abdomen more bulbous, last sternite not impressed. Length, 15–22 mm.

TYPE-LOCALITY: Córdoba, Mexico.

FLOWER RECORDS: *Buddleia*, *Jatropha* (Mexico); *Casearia*, *Baltimora* (Costa Rica).

This species may be readily recognized by the color and pubescent bands of the pronotum.

In flight, adults greatly resemble and behave like those of *Polistes instabilis* Sauss.

NEW RECORDS: See Figure 6. Known from Mexico to Costa Rica.

Genus *Stenopseutes* Bates

Stenopseutes BATES, 1873:130; 1880:44.

This genus may be recognized by the slender antennae, longitudinally tricallose pronotum, reduced prosternal process, and slender, feebly clavate femora.

TYPE-SPECIES: *Stenopseutes aeger* Bates, 1873 (monotypic).

Two species are known, one from Mexico.

Stenopseutes sericinus Bates

Stenopseutes sericinus BATES, 1880:44.

FEMALE: Integument testaceous, antennae brownish. Pronotum densely clothed with appressed pubescence. Elytra vitreous with a triangular patch of appressed pubescence at base; margins narrowly dark. Legs yellowish, femora feebly clavate. Length, 14 mm.

TYPE-LOCALITY: Mexico.

No new material of this species has been seen. The above characterization was based upon a 35-mm color transparency of a specimen in the British Museum (Natural History).

Genus *Odontocera* Audinet-Serville

Odontocera AUDINET-SERVILLE, 1833:546; WHITE 1855:187; THOMSON 1860:176; 1864:417; LACORDAIRE 1869:503; BATES 1873:36; 1880:42; LINSLEY 1963:165.

The primary characteristic of this genus in Mexico is the vitreous disk of the elytra. *Odontocera* differs from *Ommata* by this character and also by the less elongate pronotum. *Acyphoderes* differs by the tricallused pronotum and usually more strongly clavate femora.

TYPE-SPECIES: *Odontocera vitrea* Audinet-Serville (Thomson designation, 1864).

Key to the Mexican species of *Odontocera*

1. Pronotum margined apically and basally by bands of dense, appressed pubescence 2
- Pronotum lacking dense pubescent bands, disk usually with a longitudinal median callus. Length, 11–16 mm. Mexico to Nicaragua *clara*
- 2(1). Elytra more than 3 times longer than basal width, erect hairs at base short; antennae extending beyond middle of elytra. Length, 11–20 mm. Southern Arizona to Chiapas and Veracruz *aurocineta*
- Elytra less than 3 times longer than basal width, erect hairs at base long; antennae not reaching to middle of elytra. Length, 12–13 mm. Tamaulipas to Veracruz *fuscicornis*

Odontocera fuscicornis Bates

Odontocera fuscicornis BATES, 1885:289.

MALE: Form slender, rather short; integument black; antennae reddish; legs brownish, femora pale at bases; elytra yellowish, vitreous, narrowly margined by black, apices black, base with two dark humeral vittae; abdomen with first two segments partially pale. Head with front short, eyes contiguous; antennae short, segments from sixth expanded at apices, basal segments with a few long, erect hairs beneath. Pronotum moderately coarsely, subreticulately punctate; base deeply impressed, apical and basal pubescent bands silvery, long, erect hairs numerous. Elytra less than 3 times longer than basal width; punctures on vitreous areas sparse; pubescence at base long, erect. Legs with femora clavate; posterior tibiae moderately pubescent. Abdomen with last sternite impressed for most of its length, sides feebly elevated. Length, 12–13 mm.

FEMALE: Form and coloration similar. Head with eyes well separated on front. Abdomen with last sternite not modified. Length, 13 mm.

TYPE-LOCALITY: Cordoba, Mexico.

The smaller size, shorter elytra and antennae will separate this species from *aurocineta*.

NEW RECORDS: 2 males, 1 female, 22 miles [ca. 35 km] N El Limón, Tamaulipas, 9 June 1951 (P. D. Hurd).

Odontocera aurocineta Bates

Odontocera aurocineta BATES, 1873:42.

MALE: Form elongate, slender, integument black; antennae pale with basal segments often infuscated; elytra pale, shining, base often black, lateral margins black to beyond middle; legs black or with only clavate portions of femora black; abdomen with segments one and two mostly pale. Head with front moderate, eyes subcontiguous; antennae slender, extending a little beyond middle of elytra, segments from sixth slightly produced apically. Pronotum longer than broad, sides rounded; disk coarsely, subconfluently punctate; apex and base with a band of dense, silvery or golden, appressed pubescence, bands extended along sides and united; long erect hairs numerous; mesosternum densely pubescent on epimeron; pubescent bands on anterior and posterior margins of metasternum and on episternum. Elytra more than 3 times longer than basal width; margins densely punctate, pale portion of disk rather sparsely, separately punctate; pubescence sparse, short, erect over basal half. Legs slender, femora clavate. Abdomen with last three sternites densely punctate, last sternite feebly impressed over most of its length, sides margined but not elevated. Length, 11–19 mm.

FEMALE: Form similar; head and pronotum often reddish; antennae usually pale; legs pale, with femoral clavae black; abdomen usually mostly yellowish or reddish; pubescence golden. Head with eyes widely separated on front. Abdomen somewhat inflated toward apex; last sternite rounded at apex. Length, 12–20 mm.

TYPE-LOCALITY: Tehuantepec, Mexico.

This species is easily separated by the elongate form and pubescent bands of the pronotum.

Two distinct subspecies can be recognized.

Odontocera aurocineta aurocineta Bates

Odontocera aurocineta BATES, 1873:42; 1880:43.

Odontocera aurocineta aurocineta; LINSLEY 1961:163.

Odontocera aurocineta var. *nigroapicalis* FISHER, 1947:52; LINSLEY 1961:164 (type-locality, La Gloria, Cardel, Veracruz).

Males with pubescence golden; antennae usually all pale; elytra without basal black bands; legs with femoral clubs black. Females with head and pronotum black.

TYPE-LOCALITY: Tehuantepec.



FIGURE 6. Known distribution of *Acyphoderes suavis* Bates in Mexico.

RANGE: State of Nayarit to Chiapas, north to Veracruz (Fig. 7).

FLIGHT PERIOD: June to August.

Adults have been taken on flowers of *Acacia*.

***Odontocera aurocincta arizonensis* Linsley**

Odontocera aurocincta arizonensis LINSLEY, 1961:163; 1963:165.

Males with silvery pubescence; antennae with basal segments infuscated; legs usually all black; elytra black basally. Females with head and pronotum reddish.

TYPE-LOCALITY: Box Canyon, Santa Rita Mts., Arizona.

RANGE: southern Arizona to Sinaloa (Fig. 7).

FLIGHT PERIOD: July to September.

Adults frequent the flowers of *Acacia*, *Buddleia*, *Croton*, and *Jatropha*.

Although the models have not been specifically determined, it is clear that the two sexes of this subspecies mimic different insects. Females greatly resemble and fly like vespids, while males appear more like ichneumonids in the field.

***Odontocera clara* Bates**

Odontocera clara BATES, 1873:38; 1874:222; 1880:43, pl. 5, fig. 4.

Odontocera carnicollis LINSLEY, 1934:348; 1935:84, pl. 2, fig. 6 (type-locality: Bejucos, Temascaltepec, Mexico). **NEW SYNONYMY.**

MALE: Form slender, elongate; integument black; pronotum often reddish; elytra pale vitreous except for narrow black margins; legs occasionally pale; antennae often with outer segments pale annulate. Head with front moderately long, eyes subcontiguous; antennae slender, extending beyond middle of elytra, segments from sixth slightly produced apically. Pronotum longer than broad, sides rounded; disk rather finely, irregularly punctate; middle usually with a longitudinal, slightly elevated callus which extends over most of the length; pubescence fine, erect, with appressed pubescence at sides; metasternum densely pubescent. Elytra more than $3\frac{1}{2}$ times longer than basal width; base and black margins densely punctate, pale disk sparsely punctate; pubescence sparse. Legs slender; femora moderately clavate. Abdomen densely



FIGURE 7. Known distribution of *Acyphoderes aurocincta aurocincta* Bates (closed circles), and *A. aurocincta arizonensis* Linsley (open circles).

pubescent; last sternite shallowly impressed at apex, sides barely elevated. Length, 11–14 mm.

FEMALE: Form similar. Pronotum a little broader. Abdomen with last sternite narrowly rounded at apex. Length, 14–16 mm.

TYPE-LOCALITY: Chontales, Nicaragua.

This species varies in having the pronotum reddish or black. The elongate, median callus of the pronotum characterizes it.

NEW RECORDS: 1 male, 1 female, 6 miles [ca. 10 km] N La Ventosa, Oaxaca, 19 July 1963 (W. A. Foster); 1 female, Suchiapa, Chiapas, 17 July 1957 (J. A. Chemsak); 1 female, 5.5 miles [ca. 8.9 km] NW Acala, Chiapas, 23 June 1965 (Burke, Meyer, Schaffner); 1 female, 30 miles [ca. 48 km] NE Tehuantepec, Oaxaca, 8 July 1955 (D. Giuliani); 1 female, 4.4 miles [ca. 7.1 km] E Cuernavaca, Morelos, 6–8 July 1974 (Clark, Murray, Ashe, Schaffner).

Genus *Ommata* White

Ommata WHITE, 1855:194; THOMSON 1864:166; LACORDAIRE 1869:502; BATES 1870:319; 1873:26; 1880:42; ZAJCIW 1966:875; 1970:37.

This is probably the most difficult genus of Rhinotragini to define. It has been divided into

a number of subgenera, but a study of the entire group will be necessary to correctly determine the systematic position of the Mexican *Ommata*. In Mexico, the genus may be recognized by the usually long antennae, non-callused, elongate pronotum and usually non-vitreous elytra.

TYPE-SPECIES: *Ommata elegans* White, 1855 (monotypic).

Three species are presently known from Mexico.

Key to the Mexican species of *Ommata*

1. Pronotum elongate, cylindrical, not broadly impressed at base and apex; elytra subglabrous, with fine erect hairs arising from each puncture 2
- Pronotum about as long as broad, broadly impressed at base and apex; elytra densely clothed with appressed, golden pubescence. Length, 11 mm. Veracruz to Panama *sallaei*
2. Integument, especially pronotum and underside, metallic bluish to greenish; pos-

terior tibiae densely clothed with sub-erect, black setae. Length, 11–13 mm. Veracruz to Oaxaca *cyanea*

Integument non-metallic, abdomen often reddish; posterior tibiae sparsely pubescent. Length, 7–10 mm. Morelos to Guatemala *championella*

Ommata championella Bates

Ommata (Eclipta) championella BATES, 1880:42; ZAJCIW 1970:38.

Ommata (Ommata) rubriventris LINSLEY, 1934:347; 1935:84; ZAJCIW 1966:91 (type-locality: Tejupilco, Temascaltepec, Mexico). NEW SYNONYMY.

MALE: Integument black; antennae with outer segments basally yellow annulate; elytra with disk longitudinally pale brownish; femora yellowish basally; abdomen often reddish. Head with antennae enlarged from seventh segment. Pronotum narrow, shallowly reticulate-punctate. Elytra moderately coarsely, densely punctate, punctures becoming denser toward apex. Abdomen elongate; last sternite impressed at apex. Length, 7–9 mm.

FEMALE: Form more robust. Prothorax often reddish. Abdomen broader, reddish; last sternite narrowly rounded at apex. Length, 8–10 mm.

TYPE-LOCALITY: Calderas, Guatemala.

RANGE: Morelos, Mexico to Guatemala.

The small, slender form, punctuation of the pronotum, and paler longitudinal stripes of the elytra will separate this species from other known Mexican *Ommata*.

NEW RECORDS: 1 female, 7 miles [ca. 11 km] SW Yautepec, Morelos, 2 July 1961, 3,500 ft [ca. 1,067 m] (Univ. Kansas Mex. Exped.); 1 male, 1 female, 3 miles [ca. 5 km] SE La Trinitaria, Chiapas, 18, 19 June 1965 (Burke, Meyer, Schaffner); 1 female, Las Margaritas, Chiapas, 18 June 1965 (Burke, Meyer, Schaffner); 1 female, 7 miles [ca. 11 km] SW Teopisca, Chiapas, 23 May 1969 (J. M. Campbell).

Ommata cyanea Bates

Ommata cyanea BATES, 1885:288.

Ommata (Eclipta) cyanea; ZAJCIW, 1970:38.

MALE: Integument greenish or bluish metallic; antennae bluish, yellow annulate from fourth segment; legs bluish; elytra brownish down middle. Head with antennae as long as elytra, segments from sixth apically expanded. Pronotum cylindrical; coarsely punctate at middle; sparsely pubescent; strongly narrowed toward apex; apices truncate. Legs with posterior femora

elongate, feebly clavate. Abdomen with last sternite deeply impressed. Length, 11 mm.

FEMALE: Form similar. Antennae black; basal segments densely pubescent. Abdomen broader; last sternite narrowly rounded at apex. Length, 12–13 mm.

TYPE-LOCALITY: Cordova, Mexico.

The metallic coloration makes this species distinctive.

NEW RECORDS: 1 female, 5 miles [ca. 8 km] S Lake Catemaco, Veracruz, 6 July 1961 (D. H. Janzen); 1 female, 1 male, Temescal, Oaxaca, 6 July 1965 (G. Nelson and family).

Ommata sallaei Bates

Ommata sallaei BATES, 1885:289, pl. 20, fig. 15.

FEMALE: Integument yellowish; mandibles, eyes, antennae basally and at apices of outer segments, apical and basal margins and rounded median spot on pronotum, elytra except for triangular basal area, apices and dorsal edges of femora and bands on clubs of hind femora, and parts of underside black. Antennae slender, segments feebly produced at apices. Eyes widely separated on front. Pronotum coarsely punctate, sparsely pubescent. Elytra opaque, densely punctate and pubescent, apices truncate. Length, 11 mm.

TYPE-LOCALITY: Cordova, Veracruz.

This species is distinctive among Mexican *Ommata* in its color and opaque elytra. It is also known from Cerro Campana in Panama.

ACKNOWLEDGMENTS

These studies were carried out in conjunction with a National Science Foundation-sponsored study on North American Cerambycidae through Grant DEB 76-23849 A01. The authorities of the following institutions and individuals are gratefully acknowledged for the loan of specimens: American Museum of Natural History, New York; California Academy of Sciences, San Francisco; Canadian National Collection, Ottawa; Cornell University, Ithaca; Essig Museum of Entomology, Berkeley; Field Museum of Natural History, Chicago; Los Angeles County Museum of Natural History; Museum of Comparative Zoology, Cambridge; Texas A & M University, College Station; United States National Museum of Natural History, Washington, D.C.; University of Arizona, Tucson; University of California, Davis; University of Kansas,

Lawrence; E. Giesbert, D. Marqua, G. Nelson, and R. Westcott.

Celeste Green prepared the illustrations and Kathleen Sorenson the maps.

LITERATURE CITED

- AUDINET-SERVILLE, J. G. 1833. Nouvelle classification de la famille des longicornes. *Ann. Soc. Entomol. France.* 2:528-573.
- AURIVILLIUS, C. 1912. *Coleopterorum catalogus* 39:1-574. Berlin.
- BATES, H. W. 1870. Contributions to an insect fauna of the Amazon Valley (Coleoptera, Cerambycidae). *Trans. Entomol. Soc. London.* 1870:243-335, 391-444.
- . 1873. Notes on the longicorn Coleoptera of Tropical America. *Ann. Mag. Nat. Hist.* (4) 11:21-45, 117-133.
- . 1874. Supplement to the longicorn Coleoptera of Chontales, Nicaragua. *Trans. Entomol. Soc. London.* 1874 (2):219-235.
- . 1879-1885. Longicornia. *Biologia-Centrali-Americana, Insecta, Coleoptera.* 5:iii-xiii, 1-436, pls. 1-25.
- . 1892. Additions to the Longicornia of Mexico and Central America with remarks on some of the previously recorded species. *Trans. Entomol. Soc. London.* 1892 (2):143-183, 3 pls.
- CHAMPION, G. C. 1892. [Footnote proposal of *Charisia* to replace *Charis* Newman]. *Trans. Entomol. Soc. London.* 1892:161.
- CHEMSAK, JOHN A. 1967. Lectotype designations of Cerambycidae in the British Museum (Natural History). *J. Kansas Entomol. Soc.* 40:73-81.
- CHEVROLAT, L. A. A. 1838. Insectes coléoptères inédits, découverts par M. Lanier dans l'intérieur de l'île de Cuba. *Rev. Zool.* 1838:279-286.
- FISHER, W. S. 1930. Notes on the rhinotrachine beetles of the family Cerambycidae, with descriptions of new species. *Proc. U.S. Natl. Mus.* 77:1-20.
- . 1947. New cerambycid beetles belonging to the tribe Rhinotragini. *Proc. U.S. Natl. Mus.* 97:47-57.
- . 1953. New cerambycid beetles belonging to the tribe Rhinotragini. *Pan-Pac. Entomol.* 29:14-17.
- HAMILTON, J. in LENG AND HAMILTON, 1896. Synopsis of the Cerambycidae of North America. Part 3, The Lamiinae. *Trans. Am. Entomol. Soc.* 23:101-178.
- HORN, G. H. 1894. The Coleoptera of Baja California. *Proc. Calif. Acad. Sci.* (2) 4:302-449.
- JACQUELIN DU VAL, P. N. C. in SAGRA, 1857. Insectes. *Ordre des coléoptères. Histoire. . . de l'île de Cuba.* 7:137-328.
- KIRBY, W. 1818. A century of insects, including several new genera described from his cabinet. *Trans. Linn. Soc. London* 12:375-453.
- LACORDAIRE, J. T. 1869. Histoire naturelle des insectes. Genera des coleoptères ou exposé méthodique et critique de tous les genres proposés jusqu'ici dans cet ordre d'insects. 8:1-552.
- LINSLEY, E. G. 1934. A new genus and several new species of Neotropical rhinotrachine beetles. *Rev. Entomol.* 4: 345-351.
- . 1935. Studies in the Longicornia of Mexico. *Trans. Am. Entomol. Soc.* 61:67-102, 1 pl.
- . 1942. Contributions toward a knowledge of the insect fauna of Lower California. No. 2. Coleoptera: Cerambycidae. *Proc. Calif. Acad. Sci.* (4) 24:21-96, pls. 4-5.
- . 1961. A new rhinotrachine cerambycid from Arizona and Sonora. *Entomol. News* 72:163-164.
- . 1963. The Cerambycidae of North America. Part IV. Taxonomy and classification of the subfamily Cerambycinae, tribes Elaphidionini through Rhinotragini. *Univ. Calif. Publ. Entomol.* 21:165, 52 figs.
- NEWMAN, E. 1840. Entomological notes. *The Entomologist* 1:1-16; 2:17-32.
- THOMSON, J. 1860. Essai d'une classification de la famille des cérambycides et matériaux pour servir à une monographie de cette famille. Pp. 1-404, illus. Paris.
- . 1864. *Systema cerambycidarum* ou exposé de tous les genres compris dans la famille des cérambycides et familles limitrophes. *Mém. Soc. Roy. Sci. Liège.* 19:1-540.
- WHITE, A. 1855. Catalogue of coleopterous insects in the collection of the British Museum. Pt. VIII, Longicornia II, pp. 175-412, pls. 5-10. London.
- ZAJCIW, D. 1966. Estudos do genero "Ommata" White, 1855, II; Subgenero "Ommata". *Rev. Brasil. Biol.* 26:87-92, 1 fig.
- . 1970. Estudos do genero *Ommata* White, 1855. V: Notas sobre o subgenero *Eclipta* Bat., 1873. *Atas Soc. Biol. Rio de Janeiro* 13:37-40.
- ZAYAS, F. DE. 1956. El genero *Essostrutha* Thoms., adición de una especie nueva. *Mem. Soc. Cubana Hist. Nat.* 23:105-114, 1 pl.
- . 1975. Revisión de la familia Cerambycidae. *Acad. Cien. Cuba, Inst. Zool.* 443 pp., 35 figs.